Abstract

A system for controlling an electric motor comprises, in one embodiment, an encoder; a central processor in communication with said encoder; a module processor in communication with said central processor; feedback circuitry in communication with said module processor, wherein said encoder is an electronic device that provides rotor and stator positional information to said central processor, and further comprising a user interface in communication with said central processor, wherein said user interface enables a user to select preferred operational parameters for an electric motor. Another embodiment comprises a method for controlling an electric motor, comprising: determining rotor position based on data received from an encoder; determining how to energize stator coils; directing a power module to provide appropriate current to appropriate coils; and monitoring rotor response, wherein determining how to energize stator coils comprises consulting a look-up table.